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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,744	03/01/2000	YVES TROUILHET	AD6530	9833

23906 7590 06/29/2004

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
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WILMINGTON, DE 19805

EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/486,744

Applicant(s)

TROUILHET, YVES

Examiner

Sow-Fun Hon

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1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/16/04 has been entered.

Withdrawn Rejections

2. The 35 U.S.C. 102(b) and 103(a) rejections have been withdrawn due to the amendment filed 04/16/04.

New Rejections

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (previously cited EP 0520767A1) in view of Zhang et al. (US 6,166,142).

Parks et al. has a paperboard laminate wherein an embodiment shows a laminate (sandwich structure) of tie layer/amorphous nylon/adhesive (tie) layer coextruded onto the inner surface of the paperboard (column 3, lines 15-20). Parks et al. teaches that the adhesive (tie) layer is an anhydride (maleic) grafted (modified) ethylene (ethyl/methyl/butyl) acrylate with a

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basis weight of 3.2 to 13 g/m² which overlaps the claimed range of between 1 and 5 g/m². Parks et al. teaches an anhydride modified ethylene copolymer (claim 4) and anhydride modified ethylene acrylate copolymer (column 4, lines 45-60) which a genus of the claimed ethylene alkyl acrylates (claim 2). The layer of paper (board) has a weight of about 244 g/m² (150 lbs/ream) which is within the claimed range of between 20 and 400 g/m² (column 4, lines 30-35) (claim 1). The narrower claimed range of between 20 and 200 g/m² is within the realm of routine experimentation (claim 8).

Parks et al. teaches that the amorphous nylon is preferred due to its being suitable for coextrusion coating (column 4, lines 35-45) and that the basis weight is 6.5 to 60 g/m² (4-12 lbs/ream) which overlaps the claimed range of between 10 and 30 g/m². The amorphous nylon Selar PA 3426 has an oxygen permeability of 0.24 cc.mil/100 in².day.atm (column 7, lines 45-50). This is the same Selar PA 3426 used by Applicant (specification, page 4, lines 35-40). Thus the claimed oxygen barrier property of 10 and 1000 cc/m².day.atm is inherent in the laminate comprising the amorphous nylon Selar PA 3426 of Parks et al. It follows that the claimed water vapor barrier between 100 and 1000 g/at 38°C and 90 % relative humidity of the present application in terms of g/100 in².day.atm in terms of water vapor transmission rate (WVTR) at 23°C and 95 % relative humidity is also inherent.

Parks et al. fails to teach that the multilayer packaging film only consists of, on one side of a layer of paper, layers applied to it consisting essentially of the tie layer and the nylon layer, where the nylon is exposed (as defined by Applicant in the response dated 01/02/04).

Zhang et al. teaches that for meat and cheese packaging where oxygen barrier properties as well as formability are required (column 9, lines 5-10), a coextruded packaging film of a

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barrier layer and tie layer applied onto paper (column 9, lines 15-20) can be used. The barrier layer is an amorphous nylon or amorphous nylon/nylon 6 blend (column 9, lines 6-10). Nylon 6 is also known as polyamide 6, which is semicrystalline. The tie (adhesive) layer is a blend of EVA (ethylene vinyl acetate) (column 9, lines 20-30) which is an ethylene copolymer (claim 2), and a maleic anhydride grafted LLDPE (column 9, lines 25-30), which is a grafted ethylene copolymer (claim 4). Acid modified LLDPE (column 9, lines 30-35) is an ethylene-acid copolymer (claim 3). Thus Zhang et al. teaches the same combination of amorphous nylon layer tied to the paper substrate by an ethylene copolymer layer.

Therefore Zhang et al. demonstrates that it would have been obvious to one of ordinary skill in the art to have only used the combination of amorphous nylon layer tied to the paper substrate as the multilayer film of Parks et al. for packaging meat and cheese.

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. in view of Zhang et al., as applied to claims 1-4, 8 above, and further in view of Zabrocki (previously cited US 4,883,837).

Parks et al. has been discussed above.

In addition, Parks et al. teaches that the packaging material is produced by coextruding the layers (b) and (c) onto the paper layer (a) (substrate) (column 4, lines 15-20) (claim 6). Coextrusion of the layers (b) and (c) and then lamination onto the paper layer (a) (substrate) would have been obvious to one of ordinary skill in the art, and results in the same multilayer packaging (claim 7).

Parks et al. teaches that the adhesive (tie) layer is an anhydride (maleic) grafted (modified) ethylene (ethyl/methyl/butyl) acrylate (column 4, lines 45-50), but fails to teach that

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the layer of grafted ethylene copolymer further comprises up to 40 weight % of a copolyether, copolyetheramide or a polyurethane thermoplastic.

Zabrocki teaches adhesives which have unexpected synergistic increase in strength values over those of the individual components (column 9, lines 30-35) and yet are extrudable (column 9, lines 35-40). The adhesive blends comprise from about 20 to about 80 weight percent thermoplastic polyurethane and from about 5 to about 50 weight percent of modified polyolefin (column 3, lines 40-45) wherein the modified polyolefin is taught to be graft olefin copolymers, a specific example being a maleic anhydride grafted ethylene/vinyl acetate copolymer blend (column 11, lines 15-25). Zabrocki teaches that the blends are flexible, have high tensile and tear strength, with good adhesion to a wide variety of plastics, useful in plastic laminating (column 9, lines 60-68).

Both Zabrocki and Park teach the desirability of suitability for (co)extrusion in plastic laminating, and are thus analogous art.

Therefore it would have been obvious to one of ordinary skill in the art to have used the claimed adhesive blend of polyurethane thermoplastic and maleic anhydride grafted ethylene vinyl acetate copolymer of Zabrocki in lieu of the maleic anhydride grafted ethylene vinyl acetate adhesive layer in the invention of Parks et al. in order to obtain a flexible laminate packaging material with improved interlaminar adhesive strength.

Response to Arguments

6. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

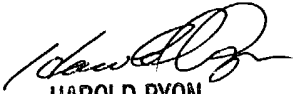
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Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8th
Sow-Fun Hon
06/17/04


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/24/04